What is Claimed is:

1. A method for performing a radix search data structure comprising:

selecting a reference table based on a value of a selectable parameter, the reference table containing a set of data bits;

receiving a key containing a set of data bits;

indexing the reference table using at least a subset of data bits in the key;

determining a result index based on at least a subset of data bits in the reference table; and

indexing a result table based on the result index to reference a result of a radix search data structure,

wherein the reference table includes at least one of a valid reference table and a transition reference table.

2. The method of claim 1, wherein the radix search data structure comprises a radix search tree lookup.

3. The method of claim 2, wherein the reference table comprises at least one entry in a memory.

4. The method of claim 2, wherein the selectable parameter comprises a selectable bit.

5. The method of claim 2, wherein determining the result index comprises computing an offset value to a pointer field.

6. The method of claim 5, wherein computing the offset value comprises computing a sum of data bits having a user specified state in the subset of data bits in the reference table.

7. The method of claim 6, wherein the subset of data bits in the reference table is based on a data bit position of an index to the reference table.

8. The method of claim 5, wherein the pointer field comprises an address of an entry of a memory.

9. The method of claim 2, wherein the result table comprises at least one entry in a memory, the at least one entry including at least one of a continue parameter, a selectable parameter, and a pointer field, the continue parameter indicating whether the at least one entry comprises the result of the radix search tree lookup.

10. The method of claim 2, wherein the radix search tree lookup comprises radix 4 search tree lookup.

11. An apparatus for performing a radix search data structure comprising:

a memory device configured to store a reference table, a key, and a result table,

the reference table configured based on a value of a selectable parameter, and containing a set of data bits,

the key containing a set of data bits to index the reference table using at least a subset of data bits in the key,

the result table including a result; and

a processor coupled to the memory, the processor configured to determine a result index based on at least a subset of data bits in the reference table, and to index the result table based on the result index to reference the result of a radix search data structure,

wherein the reference table includes at least one of a valid reference table and a transition reference table.

12. The apparatus of claim 11, wherein the radix search data structure comprises a radix search tree lookup.

13. The apparatus of claim 12, wherein the reference table comprises at least one entry in the memory device.

14. The apparatus of claim 12, wherein the selectable parameter comprises a selectable bit.

15. The apparatus of claim 12, wherein the determination of the result index includes computing an offset value to a pointer field.

16. The apparatus of claim 15, wherein the computation of the offset value includes computing a sum of data bits having a user specified state in the subset of data bits in the reference table.

17. The apparatus of claim 16, wherein the subset of data bits in the reference table is based on a data bit position of an index to the reference table.

18. The apparatus of claim 15, wherein the pointer field comprises an address of an entry of the memory device.

19. The apparatus of claim 12, wherein the result table comprises at least one entry in a memory, the at least one entry including at least one of a continue parameter, a selectable parameter, and a pointer field, the continue parameter indicating whether the at least one entry comprises the result of the radix search tree lookup.

20. The apparatus of claim 12, wherein the radix search tree lookup comprises radix 4 search tree lookup.

21. A computer-readable medium encoded with a program for a computer, the program comprising:

selecting a reference table based on a value of a selectable parameter, the reference table containing a set of data bits;

receiving a key containing a set of data bits;

indexing the reference table using at least a subset of data bits in the key;

determining a result index based on at least a subset of data bits in the reference table; and

indexing a result table based on the result index to reference a result of a radix search data structure,

wherein the reference table includes at least one of a valid reference table and a transition reference table.

22. The computer-readable medium of claim 21, wherein the radix search data structure comprises a radix search tree lookup.

23. The computer-readable medium of claim 22, wherein the reference table comprises at least one entry in a memory.

24. The computer-readable medium of claim 22, wherein the selectable parameter comprises a selectable bit.

25. The computer-readable medium of claim 22, wherein determining the result index comprises computing an offset value to a pointer field.

26. The computer-readable medium of claim 25, wherein computing the offset value comprises computing a sum of data bits having a user specified state in the subset of data bits in the reference table.

27. The computer-readable medium of claim 26, wherein the subset of data bits in the reference table is based on a data bit position of an index to the reference table.

28. The computer-readable medium of claim 25, wherein the pointer field comprises an address of an entry of a memory.

29. The computer-readable medium of claim 22, wherein the result table comprises at least one entry in a memory, the at least one entry including at least one of a continue

parameter, a selectable parameter, and a pointer field, the continue parameter indicating whether the at least one entry comprises the result of the radix search tree lookup.

30. The computer-readable medium of claim 22, wherein the radix search tree lookup comprises radix 4 search tree lookup.